

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLN. NO. 09/767,831
ATTORNEY DOCKET NO. Q62329

REMARKS

Applicant thanks the Patent Office for acknowledging Applicant's claim to foreign priority based on European Patent Application No. 00400310.9 dated February 2, 2000. Applicant respectfully requests that the Patent Office indicate that the certified copy of the priority document has been made of record in the file.

Applicant thanks the Patent Office for initialing the references listed on the PTO-1449 form submitted with the Information Disclosure Statement filed on January 24, 2001, thereby confirming that the listed references have been considered.

Applicant herein editorially amends the Abstract of the Disclosure and the specification. No new matter has been added to the Abstract and the specification. Entry and consideration of the amendments to the Abstract and specification is respectfully requested.

Claims 1-4 are all the claims presently pending in the application.

1. The Patent Office objects to claims 1-4 as containing informalities. Applicant has removed the phrase "CHARACTERIZED IN THAT" from claims 1-4. Applicant submits that the objection to claims 1-4 has been overcome, and respectfully requests withdrawal of same.
2. Claims 1 and 4 stand rejected under 35 U.S.C. § 112 (2nd para.) as allegedly being indefinite. Applicant traverses the rejection of claims 1 and 4 for at least the reasons discussed below.

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With respect to the phrases "substantially opposite" and "substantially equal", Applicant respectfully requests that the Patent Office withdraw § 112 (2nd para.) rejection because "the fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. § 112, second paragraph." *See Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818 (Fed. Cir. 1984); MPEP § 2173.05 (b).

3. Claims 1-4 stand rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by *Boie et al.* (U.S. Patent No. 5,963,273). Applicant traverse the rejection of claims 1-4 at least for the following reasons.

To support a conclusion that a claimed invention lacks novelty under 35 U.S.C. § 102, a single source must teach all of the elements of a claim. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379 (Fed. Cir. 1986). A claim is anticipated only if each and every element as set forth in the claim is found either expressly or inherently in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). A single source must disclose all of the claimed elements arranged as in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus, the cited reference must clearly and unequivocally disclose every element and limitation of the claimed invention.

Boie et al. do not teach or suggest at least a filter arrangement with linear phase characteristic, as recited in claim 1. On the contrary, the filter arrangement described in *Boie et al.*

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al. consists of two cascade coupled IIR filters (15 and 16) having a real transfer function (See, e.g., col. 6, lines 32-41 in Boie *et al.*), which means that the filter arrangement has a zero-phase and introduces no phase distortion at all, in particular no linear phase distortion.

In addition, Boie *et al.* do not teach or suggest at least a filter arrangement comprising a second filter that is the anti-causal version of a digital all-pass filter (e.g., flat amplitude characteristic) whose phase characteristic corresponds to the sum of the opposite phase characteristic of the first filter and a linear function of frequency. On the contrary, Boie *et al.* disclose, *inter alia*, a filter arrangement (15, 16) having a second filter (16) that is the anti-causal version of the first filter (15). For example, column 1, lines 40-45 of Boie *et al.* disclose that the second filter has the conjugate spectrum of the first filter, which means that the second filter is the anti-causal version of the first filter.

Furthermore, as opposed to realizing a linear phase characteristic, Boie *et al.* is directed to realizing a specific amplitude characteristic, i.e., the amplitude characteristic of a Nyquist filter. See, e.g., col. 1, lines 5-12 of Boie *et al.* Such a Nyquist filter can be implemented through a FIR filter, but this is complex. See col. 1, lines 22-33 of Boie *et al.* To avoid having to implement a lengthy FIR filter, Boie *et al.* disclose a filter arrangement consisting of two cascade-coupled IIR filters having the exact same amplitude characteristic, but having opposite phase characteristics. This way, Boie *et al.* realize a real transfer function (zero phase) whose amplitude characteristic is the square of the individual filter's amplitude characteristics.

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Based on the foregoing reasons, Applicant submits that Boie *et al.* fail to teach or suggest all of the claimed elements as arranged in claim 1. Therefore, under *Hybritech* and *Richardson*, Boie *et al.* clearly cannot anticipate the present invention as recited in independent claim 1. Thus, Applicant submits that claim 1 is allowable, and further submits that claims 2 and 3 are allowable as well, at least by virtue of their dependency from claim 1. Applicant respectfully request that the Patent Office withdraw the § 102(a) rejection of claims 1-3.

With respect to independent claim 4, Applicant submits that claim 4 is allowable for at least the same reasons discussed above with respect to claim 1, in that Boie *et al.* at least do not teach or suggest a filter arrangement comprising a second filter that is the anti-causal version of a digital all pass filter (e.g., flat amplitude characteristic) whose phase characteristic corresponds to the sum of the opposite phase characteristic of the first filter and a linear function of frequency. Therefore, under *Hybritech* and *Richardson*, Applicant submits that claim 4 is allowable, and respectfully request that the Patent Office withdraw the § 102(a) rejection of claim 4.

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In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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[[d2.]] implementing said second filter (F2) as an anti-causal version of said fictive
digital all-pass filter (APP).